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SATURDAY, NOVEMBER 2, 1839.

The Laws and Means of Nutrition.

The general law which appears to govern animal nutrition may be thus expressed; that which lives, must exist on that which has lived; or in other words, animal life is only supported by that which has had life in it. To prepare the original earths, and gaseous compounds, for the food of living organized beings, requires the action of a course of chemical affinities and attractions that change their nature, and render them suitable for the purposes of nutrition. This change is effected in vegetables, and in these the crude earths, the lime, clay and silex; the oxygen, hydrogen, azote or carbon, are converted into those substances by combination, that render them proper for the food of man and beast.

Chemistry, as yet, has not been able to imitate those processes of nature by which these primitive materials are made into animal food, the vegetable laboratory solely effecting this; but it is not at all improbable, that ere long, science, which seems at the present day to be treading so closely on the heels of nature, may unfold these mysteries, and man be able to convert the raw material, the earths and the gases, into food, without the slow co-operation of vegetable organization. Mr. Crosse has succeeded in the formation of precious gems and crystals, and of reviving or reproducing insects and infusoriæ by continued electric action; Sir H. Davy has given to us the metallic bases of most of the earths, and the alkalies, by means of the same agent; and Mr. Fox has succeeded in forming the metals, both in masses and in veins, by modifications of the same active power; and it is not too much to suppose that we shall yet be able to imitate nature in those changes, by which earths and gases are now convertible into bread and meat. If so, the doctrine of Malthus would cease to be a bugbear; for when we are able to convert the solid earth at once into good wheaten loaves, or the azote and oxygen of heaven into beef steak, the idea of the human race doubling once in twenty-five years, would wear a different appearance from what it now does, when the slow and sure way of eating bread by the sweat of the brow is compelled to be practiced.

But whatever may be hereafter, we now certainly are able to live only by feeding on what has already lived. There was at one time supposed to be an exception to this rule. The inhabitants of a part of Sweden and Norway, and in Polish Lithuania, have at times, to avoid the extremities of famine, been compelled to live on bread of which the main part was a kind of white earth resembling flour, and which, though not very pleasant to the taste, was found both nutritive and wholesome. The microscopical discoveries of Ehrenberg have at last dispelled the illusion of those who supposed this white substance was only common earth. It is found to be nothing more or less than a mass of fossil infusoriæ, containing abundance of animal matter, to which it probably owes its nutritive powers. M. Ehrenberg has dissipated all doubts that at first existed as to the correctness of his discovery, by producing in close vessels considerable quantites of the same material, made by living infusoriæ of the same species; and Mr. Bailey, of West Point, has discovered the same substance in the United States, and verified the truth of the Prussian philosopher's conjecture as to its formation. Thus far, then, it is true, that animal life can exist only as it is supported by what has once lived.

The Divine permission in regard to food, to those who escaped the consequences of the deluge, and to their posterity, would seem to be sufficiently broad. "Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things." It is true, that perhaps no single people can be found who avail themselves to the full extent of this permission, yet in surveying the different nations of the earth, it will be found there is scarcely an article either of flesh or vegetables, not absolutely poisonous, that is not by some of them used for food, and the choicest dishes of one people are most repugnant to the palate of some other. There can doubtless be traced a providential arrangement in this, since had the tastes and preferences of all been similar, there is no single article of food that could have met the universal demand.

Among nations calling themselves civilized, the kinds of flesh most in use is that of the domestic animals, cattle, sheep or swine; the common fowls and fish; but as we descend in the scale of civilization, or stern necessity presses, there is scarcely an animal or insect that is not devoured, and made subservient to the purposes of nutrition. The markets of any country, where markets exist, furnish the best criterion by which to judge of the quality and the variety of the articles used as food; and any one who takes an occasional stroll through those of *our* principal cities, will see articles for sale at different seasons of the year, which he little dreams go to make part of the food of the American people. But it is among the civilized of foreign countries that these things strike the traveler with most force. With regard to food, England is too much like America to allow any thing particularly new to exist; it is only when that country is left, that we find things used as food to which the English or American palate has not been accustomed, meeting us at every step.—Thus, frogs in multitudes are eaten at Paris and Vienna, and constitute to the initiated a favorite as well as nutritious diet. The writer of a Three Years' Residence in Italy says, when at Rome:—

"Passing through the market this day, we saw things exposed for sale which we should suppose human creatures would hardly choose voluntarily for food. These were baskets of frogs and shell snails. These were crawling about, and were pushed back by the boys.—The frogs were skinned, and looked white like chickens. On the stalls were owls, vultures, kites, bitterns, tomtits, cats, hedge hogs, ravens, and flesh of sharks."

In some parts of Europe, cats are so frequently imposed on travelers as hares, that those who are squeamish as to their food, usually order hares to be served with their feet attached, to prevent the possibility of deception. In many parts of South America snails are considered delicious; and in Africa, Brazil, and other parts of the world, ants are cooked in various ways, and made an important article of human sustenance. In all parts of the world, where monkeys exist, they are considered a favorite dish; and when we consider the slight gradation in gastronomic propensities, necessary in the monkey eater to make him a cannibal, instead of being surprised that such degraded beings exist at all, we shall wonder that under such circumstances they are not more frequent.

Among the Indians of our country, and the South Sea Islanders, dogs have always been a favorite article of food, and the one selected as most acceptable to the gods, hence generally offered in sacrifice. Blood is still used as a drink by the Esquimaux and other nations of the north. According to Park and Lander, lizards, mice, rats, and caterpillars are used for food on the Niger; and it is well known that on the African shores of the Mediterranean, and in Egypt, serpents are a common article of food. We have ourselves known a man who made an invariable practice of swallowing a rattlesnake's heart, whenever one could be obtained, and if still alive and palpitating, so much the better.

Worms of various kinds are a common food among the Burmese and some other nations; the Greenlanders find whale or seal blubber a dainty dish; the Arabs eat locusts and grasshoppers; the Hottentot fattens on the entrails of animals; and the luxurious Roman of olden time found, and the half naked native of the tropics at the present day finds the large white grub existing in the wood of the palm and some other trees, the most favorite kind of food. We have the authority of Kirby for stating that the red headed grub found in the earth, (the larvæ of the May bug, *Melolontha,*) is used extensively for food by many of the subjects of the British empire; and the grub, the larvæ of the cockchafer, is warmly recommended by Dr. Darwin to the favorable notice of the English people. Want of food cannot be the cause of this diversity in the use of animal food; it may have originated from habit and peculiar circumstances; and it proves that all that has lived is capable of being used for the support of animal life, and is possessed of nutritive properties.

The range of vegetables used for nutritive purposes is not less extensive than of animals, reptiles and insects; though in the vegetable department there are some few possessing qualities of a poisonous character that forbid their use. The graminæ, or grain producing plants, are scattered over almost every section of the globe, and contribute more perhaps than all other things to the nourishment of man. The link that connects inert matter, and animal life, vegetables are as useful as they are widely extended. Multitudes live on them altogether, rarely, or perhaps never, tasting flesh, while as the great producer of the last, they directly or *indirectly are the sole preservatives of animal life.*—The acorn, the chestnut, the date, the banana, the bread fruit, and the various kinds of domestic fruits, may be mentioned as the contributions to subsistence made by trees; the several kinds of grain and corn; the produce of vines, grapes, currants and berries; creeping vines, as the melons, pumpkins and squashes; roots, as the yam, sweet potatoe, the common cultivated roots; may all be adduced as proofs of the ample provision that nature has made in this department of her domain to support animal life, and contribute to the subsistence of man.

To vegetables we also owe the most common, pleasant and nutritive drinks, coffee and tea, spruce and table beers, and even strong beer, when properly made from malt and hops, without any of those cheap and noxious ingredients with which it is too common to adulterate it, contains nutritious and strengthening qualities, of vegetable derivation. Milk, the only drink furnished by the animal kingdom, the only substance prepared by nature as food, and intended for nothing else, is given pure only by the animal; yet there are some kinds of the South American palm that produce a liquid scarcely distinguishable from the purest milk, and but little inferior to it in nutritive qualities.

In thus imperfectly illustrating the grand law of nutrition—that all which is living must subsist on that which has lived—and pointing out the ample means that nature has provided for carrying her intentions into effect, we have been obliged to omit many things having a bearing on this point, which the reflections of the reader will doubtless suggest. In the view we have taken of the subject, the importance of the vegetable kingdom plainly appears; and since the great end of agriculture is the increase of the means of supporting animal life, every thing connected with that subject, assumes an interest proportioned to the necessity of its success. No thing but an improved agriculture enables the present population of the earth to find a certain and abundant

subsistence, while the small population of the ancient world were continually exposed to the dangers and realities of famine; and nothing but continued improvement can ensure an adequate supply to the increasing millions of the globe.

Agricultural Warehouses.

One of the great causes which has led to the superiority of English agriculture, is to be found in the establishment of agricultural warehouses, nurseries, seed-stores, &c. in all the principal cities and villages of the kingdom, where agricultural implements of the best kinds, seeds and trees of the best quality and varieties can be obtained by all who wish them, at reasonable rates. The establishments of Loudon, and of Knight, in London, and of Lawson, and Dickens, in Edinburgh, are celebrated for the extent of their collections, the great amount of business they perform, and the acknowledged benefits they have conferred on the agricultural world. In these warehouses, seed stores and nurseries, may be found plows, harrows, rollers, and all the tools and implements required by the farmer and gardener; seeds of the purest and most approved varieties, and fruit and forest trees suitable for every situation. A large proportion of the farmers purchase at these stores their seed wheat, their grass seeds, &c., and by long experience, the proprietors of these establishments, knowing the kind and quality of the soil, can better apportion the kinds and quantity of seed required for such lands than the cultivators themselves. So extensive and necessary has these branches of business become, that in a late number of the London Gardener's Gazette, a list of those the most distinguished are given from the principal cities and towns, amounting to no less than 800.

In the U. States, such establishments could scarcely be less useful than they have proved abroad; yet their number is very limited, compared with what we think the advancement of agriculture, and the benefit of the farmer demand. A few, however, exist, and we hope their success will be such as to cause the establishment of others at all the principal points of our country. If in every principal city or village the farmer could be certain of finding at some store or warehouse, the implements he needs, of the best kinds and quality, he would esteem it a favor, as saving him much trouble in collecting from various places the articles he wants. And so with places for the sale of seeds and trees, which are becoming daily more useful and indispensable.

The agricultural warehouse of Mr. Breck, at Boston, the publisher of the New England Farmer, is one of the most extensive in New England, if not in the United States, and has been found of essential service to the farmers of that region. In the city of New-York, a beginning was made some years since by Mr. Fleet, then publisher of the New-York Farmer, in establishing such a warehouse, and is now carried on with spirit, and we trust success, by J. W. Weaver & Co., 79 Barclay-street. With the warehouse is connected a seed establishment, conducted on liberal and honorable principles, and deserving the notice and patronage of the public. At Albany, Mr. W. Thorburn (not of Chinese tree corn memory) has added the disposal of agricultural implements to his former business as a seedsman, and is doing much to bring within the reach of farmers in that vicinity, the best implements required by the cultivator of the soil. Several minor establishments have also been opened in the state, the business of which is rapidly increasing, and the benefits of which are every year more clearly felt and acknowledged. Among the seed stores of the state, the Rochester one holds a distinguished place for extent and usefulness, and the new arrangements of Mr. Batcham will doubtless give it greater efficiency and activity, and consequently diffuse its benefits more extensively through the district.

We always hail the establishment of nurseries of fruit or forest trees, warehouses for the sale of agricultural implements, and seed stores for the dissemination of seeds of good quality, and many varieties, as an omen of good to the country; as a proof that the spirit of inquiry and observation is awake, and that our farmers are beginning to appreciate the difference that exists between implements of the same name, and seeds of the same variety. Good tools, and good seeds, are indispensable to good farming, and this should be understood and practiced upon by the farmer. A choice of seed will not unfrequently make a difference of one-third, or even more, in a crop of wheat or corn, and in nothing do farmers err more frequently than in sowing an impure, heterogenous mass called grass seeds, but in reality made up of all manner of foul stuff for grass seed, thus propagating and perpetuating various nuisances on their farms. We say, let warehouses and seed stores be well patronized so long as they furnish good tools and pure seeds. The country reaps the benefit.

TRANSPLANTING TREES.

The planting of trees, either fruit or forest ones, though too much neglected by farmers, is at times practiced by most of them, and should be so conducted as to not only preserve the tree and prevent the entire loss of the labor, but also to afford it the best means of a rapid and healthy growth. Trees may be transplanted at any time while the sap does not flow, a period among deciduous trees marked by the fall of the leaf; or from October to April, but the time generally chosen is the spring. Convenience, however, should be consulted in this matter; as from the full employment of time in the spring months, the operation is very hastily and imperfectly performed, frequently to the injury or loss of the tree.

In transplanting trees, as much of the dirt should be retained on the roots as possible. This will prevent the drying up of the small fibrous roots, which are indispensable for the nourishment of the tree, and will in part prevent that shock which all plants experience more or loss, when removed into a soil unlike that in which they have grown. The long roots, of course, must be cut off, and in fruit trees, those that penetrate directly downwards may be spared without danger; but in forest trees the downward shoots should be retained as far as they can be. It is the custom with many in setting out trees, to dig a small hole, but far deeper than that in which the tree has formerly stood. Into this deep hole the roots are forced by bending, twisting and treading, the dead earth is shoveled in upon them, and the trees are left to their fate. Instead of its being a wonder that many perish under such treatment, the wonder is that any survive.

When trees are to be transplanted, the hole for the reception of the roots should be broad but not deep, as no tree when it is removed should be set in the earth more than a few inches deeper than it stood before.—The vegetable mold and rich earth of the surface should be retained for placing on the roots of the tree, and if there is a sufficient supply of the proper kind, it should be brought for the purpose. The tree should be removed and placed in the spot dug for it with as little disturbance of the rootlets as may be, and without any bending or bruising of the larger ones. If these are too long, they may be cut off, but all should be allowed to remain that the pit will receive. After being placed, the best earth should be thrown on the roots and shaken or gently pressed down till the whole are covered, and the hole filled.

It is necessary that the tree transplanted should be kept firm in the earth until the roots have time to fix themselves, or it will be liable to be loosened and blown over by the winds. To secure it in this respect, some have recommended that a stake or stakes should be driven into the ground, the top inclining towards the tree, to which the body is to be tied. Others, and the practice is generally followed among European planters, place three strong sticks in a triangle form across the roots of the tree, the angles being secured with a stout wood hook driven into the ground, and thus all shaking or injury from winds is averted. McKnight maintained that in transplanting trees, the greatest care should be taken to give them not only the same kind of soil, but the same exposure, and that the side of the tree exposed to the sun before planting, should be so placed as to receive its most direct rays afterwards.

Evergreens require a different treatment and a different time of transplanting from those that shed their leaves in the fall. The best season for transplanting such is in the fore part of June, or latter part of May, but without some preliminary measures many so removed will perish. It has been recommended, and the method when tried has proved very successful, that some two years before removal, or one year at least, that with a sharp spade all the surface, and most of the other roots, be cut off at the distance of two or three feet from the tree, and that it then be allowed to stand undisturbed till wanted for removal. The result will be, that the earth near the tree will be filled with abundance of fine vigorous roots, and if, when taken up, proper precautions are used in lifting it from the bed, it may be removed without the least danger, or scarcely retardation of its growth.

Extracts of Correspondence.

The following is from a gentleman of agricultural experience in Pennsylvania, and his remarks on draining, will commend themselves to the notice of every farmer who owns soils that require this improvement:

"There is no improvement except the introduction of agricultural schools, that will ever work so great a change in enlarging our productions, as the practice of thorough draining; and this practice will naturally follow the schools. This county, you are well aware, is comparatively hilly, and consequently water cannot remain on the surface as it does in parts of Seneca, Cayuga, and some other counties south and west of Onondaga; but my belief is firm, that our productions might be trebled by draining; thus making the land more productive, and bringing more of it under cultivation. It is the only plan that can be adopted to introduce a system of rotation, and the absence of this plan is what has led to the notion that productive grass lands ought to be seldom disturbed by the plow. This, I think, should have a name of its own, and should be denominated the '*indolent system*,' because the trouble and expense of working lands that thus evidently exhibit signs of a superabundance of vegetable matter, as well as those that are thought to be stiff clays, is the reason given for calling them *natural grass* lands, when the fact is indisputable that dry lands are always more productive than wet, whether the product be grain or grass, other things being equal. And my mind has long settled under the conviction that clay soils possess more of the food of plants than any other soils whatever; and that irrigation is never useful to any thing but grass. Surely no one will deny that grass enjoys itself in ground fresh from the plow, much more than in hard stubborn ground that is merely irrigated; and the more stubborn a soil is, the more it should be worked, instead of being kept without work. What a shameful waste it is to put manures on the surface of hard stiff clays, when the first rain washes it into the next river, creek, or gully, and where none of it can enter into the composition of the soil, or produce the least amelioration."

Here is another extract on the subject of our great staple, and the statement respecting the absence of smut in the district referred to, should stimulate our farmers to inquire into the cause. Whatever it may be, the fact is an important one, and which, were it universal in our country, would add materially to the quantity and value of our whole wheat crop. Smut is now rarely found in the wheat of Western New York, to an extent positively injurious, but its presence at all, in any degree, ought not to be tolerated.

"Our winter wheat has suffered like yours, from rust, which I apprehend is a disease that can never be entirely prevented, although much may be done by preparing the soil, and something by draining it. This disease I believe to be the same called 'Mildew' at the South; and it is one that Shakspeare is the production of the foul fiend Fiibbertigibbet himself. I have some doubts, however, whether British and American writers agree in their meaning when they use the same term. The 'clammy mildew' said to come from the North East wind, is an English notion; while with us a hot sun, and frequent showers, with an overcharge of manure, causing a too rapid growth, and a too abundant flow of the sap, is the most generally supposed cause. If this is the cause, farmers should not complain much of it, as it usually accompanies a rich luxuriant growth of their other productions. Smut is a disease, (or at least a complaint among farmers,) that is exceedingly rare

in southern Pennsylvania, and I have doubts whether nine tenths of the inhabitants ever heard the name. Whether it depends upon any peculiarity of soil or climate I cannot say; but I am satisfied that with reasonable care, no farmer need suffer from it. One thing is evident, it grows and increases from every seeding, and if this fact was not sufficient to satisfy us that it is possessed of vitality, the usual mode of eradicating it by brine and lime would be adequate. It seems, however, very uncertain whether it is the effect of vermin, or the growth of a seed too small for the naked eye, sticking around the wheat; the bearing of my mind, is to the former opinion; but in either case, nothing but indolence need make it the cause of loss. I may say, however, that lime alone is no preventive, as it shows itself through Western New York, and in other countries, particularly England, where lime is applied without stint or limit.

New England Cattle Shows.

October is the month for the triumph of the farmer, as well as for his relaxation from the severer toils of the season; at least such is the case among our brethren 'down east,' where the right feeling and proper spirit of enterprise among farmers has instituted and kept up with increasing popularity and usefulness, annual shows and fairs. That of the Agricultural Society of Worcester came off on Wednesday the 9th ult., and in almost every respect has exceeded in the number and value of exhibited articles, any previous show.

The appearance of the cattle was very fine. A team of seventy-five yoke of working oxen from the town of Sutton was a beautiful sight. A large number of fine milch cows from the Worcester dairies were shown, of both the native and imported breeds, and several creditable instances of milk and butter were mentioned as their products. But the great point of attraction was the fat cattle of the pens, and we much question whether Smithfield itself could rival the Worcester show in the matter of *grass fed* cattle. The ox, Columbus, weighed 2664 lbs. Another belonging to Mr. Barnard, 2252 lbs.; another to Mr. Adams, 2115 lbs.; another to Mr. Estabrook, 1920 lbs. A pair of oxen from Sutton weighed 3788 lbs.; another pair of Mr. Estabrook's, 3880 lbs.; a pair from Northboro', 3905, and a pair belonging to Mr. Barnard, 3914 lbs. The plowing and drawing matches were admirably conducted, and went off with great spirit. The only defect in the plowing was, it was too shallow.

At Worcester, as elsewhere, the Berkshires bore off the premiums among the pigs, from all competitors, and many fine animals were shown. The reports from the different committees of observation were good, and will doubtless be laid before the public. A profusion of fine vegetables, such as squashes, Rohan potatoes, beets, corn of several varieties, butter and cheese from the Worcester dairies, &c. &c., were displayed in the halls of the society, and in connection with the animals gave abundant proof of fertile soils and skillful husbandry. We love to place on record such exhibitions; they are the triumphs of peace; may they be perpetual.

Query—Fattening of Animals.

We are unable to give a satisfactory answer to the query of our correspondent, Holkham. We have never known any experiments undertaken to test the comparative cost of making beef or pork. With us, the making of pork is considered the most profitable, especially since apples and roots have to a certain extent been substituted for corn and barley. We should be pleased to have some of our farmers who have had experience in making both beef and pork, favor us with their views of this matter, as it is one which is daily becoming of more consequence to the public.

"Can you give me, through the Farmer, any estimate of the relative cost of beef and pork, when fattened on a farm? If we should undertake like some of your farmers, to fat from twenty to sixty hogs, we should have to abandon the beef. Pork with us, always commands nearly double the price of beef, and potatoes answer better to feed the former than they do the latter. I have long thought that an ox fatted to bring sixty dollars, costs more when ready to slaughter, than three hogs that bring twenty dollars each; but I have seen no safe estimate, nor satisfactory experiment. Vast quantities of potatoes of the best quality are annually raised here, but cattle require corn, and oatmeal, and pumpkins, all of which are wanted for other purposes. Perhaps when the turnep culture is fully established, beef will be the most profitable, because, although hogs will winter on turneps well, they will not fatten on them as beef cattle will. There is a remarkable fact to be observed in our apple orchards this season; all the natural fruit is abundant, while every grafted tree is almost entirely without fruit. HOLKHAM."

Albany Horticultural Society.

This society held its annual meeting at the Athenæum buildings in Albany, on the 17th of September; and the exhibition of fruits, flowers and vegetables, was of the most encouraging kind. Some mammoth vegetables were exhibited, among them a pumpkin weighing 112 pounds; drumhead cabbages weighing 21 pounds each; fine specimens of Rohan and seedling potatoes; several fine varieties of corn; peaches, plums, and apples of the most approved and valuable sorts; and some twenty-five or thirty premiums were awarded to the most successful cultivators. Such meetings have an excellent effect in making the public acquainted with the choicest varieties of fruits and vegetables, and inducing attention to their production. Very few gardeners or farmers are satisfied with the cultivation of inferior articles, when occular demonstration is given at such exhibitions of the existence of superior varieties, which can be grown with no more cost or care than has been given to the others. Every city and village should have an association of this kind, to reward merit and elicit inquiry and investigation.

Care of Farming Tools.

We believe it may safely be asserted, that the farmer in a course of years sustains as much loss, or is put to as much expense in procuring tools, by their decay in consequence of needless exposure, as from their actual wear on the farm. How many are the instances in which the farming implements, the plows, harrows, roller, &c., instead of being carefully housed when their use for the year is over, are left in the fields, or peradventure drawn up in battle array in front of the house, occupying a goodly portion of the road, and when covered with snow, forming most convenient places for breaking horses legs, tearing off shoes, &c. &c. Perhaps, in addition to these, are sundry wagons, carts, hay-racks, and other necessary things, like the former, exposed to the decay which must result from exposure to the rains, the freezings, thaws and snows of winter. Now, one such season of exposure does more to weaken the wood of these implements, promote decay, and render new purchases needful, than their ordinary wear on the farm, with careful usage and protection from the weather. As a general rule, it may be remarked that no implement, tool or carriage of any kind should be exposed when not in use. Those not wanted in the winter should be secured from the weather during that time; and so with those not required during the summer season, as sleighs, sleds, &c. The skillful, thrifty farmer is known by his attention to the minor points of agriculture, by his care to save, as well as to acquire; and he who neglects the lesser things cannot fail to find the drawback on his profits large and constant.

Propagating Fruit Trees from Scions.

A subscriber in Vermont lately requested to know whether apple trees could not be propagated from scions or cuttings; the best season for cutting the shoots; the method of preserving them till wanted; the mode of setting or planting them; and whether the trees when grown would be like the original stock? &c. The following extract from the Farmer's Cabinet is the best reply we are able to give, having never tried this particular mode ourselves, and having never to our knowledge seen an apple tree growing from a cutting, though we have seen them produced from the roots. We should have much more confidence in seedling trees, grafted or inoculated to insure the right kind of fruit, than we should have in cuttings. If this mode of growing apple trees could be made to succeed, however, it would certainly be a decided improvement on all other methods, as there could be no doubt but that the tree would resemble, when grown, that from which the cutting was taken. Will some or many of our friends give the plan a trial, and report the result?

"The method of preparing the plant is as follows:—Take the scions as for grafting, and at any time after the first of February, and until the buds begin to grow considerably, and put each end of the shoot in melted pitch, wax or tallow, (grafting wax would be good,) and bury it in the ground, buds uppermost, while the body lies in a horizontal position, at the depth of two or three inches. We are informed that trees obtained in this way will bear in three or four years from the time of planting. We have no doubt of the practicability of this method of raising fruit. A gentleman in this vicinity the last season planted about twenty different kinds of pears, which appear to flourish. The composition which he used was shoemaker's wax."

Hair of the Horse.

From the non-conducting qualities of hair, its almost universal diffusion over the bodies of animals, the change which it undergoes during sickness, and the effect which it exercises on the perspiration of the animal, it may safely be inferred that it performs an important part in the animal economy. Nature arranges this covering to the wants of the animal, or the climate it inhabits. Under the equator, the hair of animals is scattering, and with few exceptions coarse; as we recede from that point, the hair becomes thicker and finer, until in high northern latitudes, fur of the fineness of silk, constitutes almost the entire covering. The horse is subject to the same laws, that govern other animals in this respect, as may be seen by comparing the Arabian horse, or other southern horses, with the northernmost breeds, the Shetland horse, for instance. In the first, the hair is short and smooth during the whole year; while in the latter, it is long at all times, and during the winter, has the thickness and closeness, almost of wool.

Animals shed, or moult their hair, twice a year; in the spring, to prepare them for the summer heats; and in the fall, to make way for a new, thicker, and finer, covering. These changes of hair, or moulting, are always productive of more or less constitutional disturbance to the animal, affecting his health, and frequently requiring the attention of his owner. While the horse is shedding his coat, efforts to hasten the process, are improper; and the old hair should not be removed until the young is prepared to take its place. Rubbing down, to remove the loosened coat, and give a slight friction to the skin, is admissible, but at this time, the curry-comb, or card, should be banished from the stable. At this period there is always more or less fever, and any treatment that can add to the irritation of the skin must be carefully avoided. Farmers in general pay little attention to their animals at this season, and their horses not unfrequently suffer in consequence of this neglect, in the way of colds, distemper, loss of flesh, &c.

Horses that are kept in warm stables, at all times of the year, do not have that variation in the thickness of coat during the winter or summer, that occurs to those exposed to the vicissitudes of our climate. They resemble in this respect, the animals of a warm climate; but experience shows, that such warm housing, is unfavorable to their general health, and that when exposed to the cold of our latitudes, they suffer far more than those animals do, that have been inured to exposure, and their hair has become adapted to its exigencies.

Horses that are suffered to lie in pastures after cold weather comes on, instead of having their hair short and smooth, have it longer and thicker, and of course, standing out more in the manner of fur-producing animals, during the season. Such animals, when afterwards put in the stable, though the appearance of the coat may be improved, cannot be made to look like those taken up before the thickening of the coat for winter begins. Farmers, and others, therefore who are nice about the appearance of their horses, must take them from the pasture to the stable, as soon as the fall moulting commences; those who regard his comfort, more than his appearance, will permit sufficient exposure to thicken his coat, and prepare him to meet the blasts of winter, without injury.

COMMUNICATIONS.

Time of Transplanting.

Mr. Tucker—There has been a great deal said and written, upon the best time for transplanting the various kinds of trees, shrubs, &c. Some suppose the spring of the year to be the best time, and others prefer fall. This limiting the farmer to a particular time of year for doing various kinds of work, he is sure to leave some undone, in the course of the year. Every farmer has his own way of farming, and there are scarcely two farmers in our country, that follow the pursuits of agriculture alike. Some follow one plan to obtain a crop, and others very different. There are hardly two farmers agree in this vicinity, respecting the transplanting of fruit trees, but the majority, I believe, prefer the fall, rather than spring. Trees set out in the fall, will do much better the next season, and are not so liable to die, as those set out in the spring. The reason of this is obvious to every farmer who has made it his practice to transplant trees, shrubs, &c., upon his premises. The earth in the course of the winter, becomes settled around the roots, so that it will do nearly as well, if it be well set out, as though it had been transplanted. There are four months in a year, that trees will do well to transplant, and they will generally succeed, if the work be well done, viz: October, November, April, and May; but the earlier we attend to it, (either in the fall or spring,) the better it is for the trees. Most persons who believe the spring a better time for transplanting, than fall, have come to that conclusion, from their transplanting too late in the fall.

Those in this vicinity, who have tried transplanting in the spring and fall too, prefer the latter to be the best time in the year for transplanting trees, shrubs, grape vines, &c. I have scarcely seen a tree die, that was transplanted in the fall, while those transplanted in the spring, have dwindled away, and by midsummer be entirely dead.

Experience has shown me, that to have trees do well by transplanting, we must do it in the fall, and be very careful, when we take them up, to take up as many of the roots as we possibly can, and be sure to set them into the ground, as far as they were naturally.

Naught appears so beautiful in the eyes of the passer-by, than to have trees of every variety, set around our dwellings; it shows that we have a great taste for having things look fine and graceful, around us. I have given you my views upon the subject of transplanting, and if you think it worthy a place in the columns of the Farmer, insert it, and oblige your friend, &c.

South Venice, Oct. 26th, 1839. W. S. T.

The Wayne County Agricultural Society, Will hold its annual meeting at Newark, on Tuesday, the 19th of November inst., at 10 o'clock, A. M., at which place will be sold the celebrated bull, Neptune, imported by Thomas Weddle, Esq., of East Bloomfield, and much other valuable Improved Stock, will be offered. Pens provided for stock from abroad.

Hamilton Rogers, *Sec'y.*

Newark, November 1, 1839.

The Sugar Beet.

Mr. Tucker—From the experiment I made this season, in raising *French Sugar Beets*, I should think that suitable ground, with good tillage, would produce from 600 to 800 bushels to the acre. My largest weighed twelve pounds eight ounces. Yours, &c.

Oct. 23, 1839. L. A. Ward.

A composition for coloring and preserving Gates, Pales, Roofs, and Timber generally, from the weather.—Melt 12 ounces rosin in an iron pot or kettle, add 3 gallons of train oil, and three or four rolls of brimstone, when they are melted and become thin, add as much Spanish brown, or red or yellow ochre, or any other color you like, ground as fine as usual with oil, as will give the whole the shade wanted. Then lay it on with a brush as hot and thin as you can. Some days after the first coat is dried, lay on a second.—*Domestic Encyclopedia.*

From the New England Farmer.

New York, 21st Sept., 1839.

Sir—The New York Urate and Poudrette Co., finding that gentlemen who had purchased their manures had been experimenting with the articles, some advisedly and others mistakenly, it became desirable for many reasons to learn—

1—On what particular grains or garden vegetables the manure was used, the quantity applied, and the result:

2—To know the precise manner and result of each trial:

3—How the urate and poudrette compare with other manures in their effect: and

4—Generally, whether it was not desirable to the farmer and gardener to have the contents of sinks and privies made into *inodorous* manures.

In answer to their circular sent to Mr. Linn, of Schenectada, they have received a letter of so interesting a character, that we ask the publication of it at as early a day as your arrangements and convenience will permit.

Amended instructions, the result of information received, will be published in a few days for *gratuitous distribution* among those who have or may wish to use the manures.

(COPY.)

Schenectady, Sept. 19, 1839.

The New York Urate and Poudrette Company:

Gentlemen—In answer to your "circular," I would say, that I obtained from your company a barrel of poudrette last spring, intending to test its value as a manure, by a few close and accurate experiments. It came to hand, however, so late in the season, that I was unable to apply it as I intended, or to arrive at results which would in all respects prove the value of the substance as a manure, or the best modes of applying it. I applied it to a variety of vegetables in my garden, and also to a small portion of a field of corn of about five acres, at my farm in the vicinity of this city. The vegetables in my garden have grown with unusual richness and luxuriance, and have most evidently felt the effects of the application. Of the results at my farm I can speak more satisfactorily, because there I can compare the portion which *has*, with another portion of the same crop, in the same field, which *has* not received the poudrette. This crop is upon a strong rich soil, which had been slightly manured in the hill from the fold-yard at the time of planting. At the first hoeing, and when the plants by reason of the unfavorable season were extremely backward, I directed my farmer to apply to a corner of the field where the crop was the least promising, a handful of poudrette to each hill, covering it at the same time with a thin coat of earth. This was faithfully done until the poudrette was consumed. The remainder of the field received, a part, the usual dressing of *plaster*, and a part, of *ashes*. The plants to which the poudrette was applied, were the first to change color—throwing off the sickly yellow hue, and adopting a deep green. At the period of the second hoeing, the same plants retained not only the appearance of better health, but had obtained greater vigor and more size than any others of the same crop. They have held the same distinction throughout the season; and it is now plainly visible, although the entire crop is a fair one, that when we come to harvest, we shall gather a greater weight of stalks and more grain from the portion where this manure was applied, than from the same space at any other point in the field. We have certainly no experience proving that the same results could have been reasonably expected from the application of any other of the various manures in common use.

With us, plaster has long been considered the grand restorative for this crop, and ashes, with many farmers, almost a specific; and indeed that both substances are very useful as manures on most varieties of soil, is universally conceded. Mills to grind plaster for manuring purposes, are as common throughout this part of the country as those devoted to grain; and I have seen boats loaded with leeched ashes, toiling their way from the far west, in order to enrich farms on Long Island.

In this experiment, poudrette was applied side by side with plaster and ashes, under circumstances in favor of the latter, and yet they have most indisputably yielded the palm to the former: and all this is not without reason. *Heat* and *moisture* are the sources of vegetation: poudrette, if it have *it* not in itself, will generate more heat and for a longer period, than either plaster or ashes, and will absorb and retain more moisture. It seems, also, to decompose inanimate vegetable substances in the soil with which it is mixed, and so to diffuse and incorporate itself with the soil as to change its color around the plant to which it is applied. Like most other manures, (only more sensibly and rapidly,) it imparts of its qualities to every substance with which it comes in contact, and by the aid of its own and borrowed heat and moisture, assimilates all to itself, and thus exercises, although applied in most inconsiderable quantities, a certain and immediate influence on vegetation.

I regret that I did not receive the article so as to apply [illegible] at the time of planting. I am not sure that the results would have been more successful, and except for the purposes of experiment, I should be content to use it hereafter on most crops, as I have done this season.

Desiccated manures have long been appreciated in Europe. There, one ton of them have been estimated to be equal in fertilizing properties to thirty-six tons of barn-yard manure. At this rate, there is a large balance on the score of economy in favor of the former; and when it is remembered that the manures as prepared by your company, are wholly inodorous, and may be conveyed in barrels to the most remote parts of the country as commodiously as flour, and at a trifling expense, our agriculturists should be moved by every consideration connected with cleanliness, rural economy, the productiveness of the soil, and the right use of the means which Providence places before them as incitements to industry, to promote the use of substances, which, left undisturbed, are worse than useless—scattering in our large cities and towns disease and death, and which, when submitted to your *alchymy*, spreads health and verdure, and blesses and rewards both citizen and husbandman.

I shall be pleased to receive your "improved instructions" for using the manures, of which you speak, and to know at how early a day this fall I may order a few barrels* for future experiments.

Very respectfully, yours, &c.

A. L. LINN.

The following is a copy of the improved instructions alluded to in the foregoing:

MANURES.

The attention of the public has recently been directed to the use of Urate and Poudrette. It has long been known in France as the most efficacious of all manures and the experiments made during the past and the present year, viz: 1838 and 1839, in the use of Poudrette in the Northern and Eastern States, but more especially in and around the city of New York, have awakened the attention of both farmers and gardeners. The Royal Academy of Agriculture in England, have caused experiments to be made of the respective power of the different manures, and upon trials so made, it appears beyond a doubt that manure made from sinks and privies, is superior to any other productive agent for agricultural purposes. It is necessary to add, that it is worse than labor lost, to cultivate worn out or poor soils without the use of manure? He who expects to be liberally rewarded for his labor must give liberally what nature requires. The wise man has said, "he that watereth shall be watereth also himself."

AMENDED DIRECTIONS.

Directions for their use were given by Peter Barthelemy, (who was one of the first discoverers in France of the present system of preparing the articles,) how and in what manner they should be applied, and who recently introduced their manufacture in the city of New York. Many of the persons who have used the articles, have found from practical experiments, that the former directions may be amended advantageously, and it is doubtless the case that many new methods may be discovered, which it is hoped will be communicated for public benefit.

Urate is the product of the *liquid* part, and Poudrette of the *substantial* part of the sinks or privies, both of them reduced by a different process, to a dry and inodorous substance, and used as the best of all manures known to agriculturists and horticulturists, being an animal manure of the richest and purest kind, and the most powerful of any application that can be made to the earth.

Urate.—The urate may be used in its dry state by spreading it on the land as you would lime or ashes, or, after having been dissolved in water, may be used through a watering pot, or by a cask on cart wheels, in the same manner as the streets in New York are watered in summer.

For all kinds of small grains, such as wheat, rye, oats, barley, flax, and others of the like kind, it may be sowed dry upon the soil, in the proportion of 12 to 18 bushels per acre, according to the quality of the land, and then harrowed in.

For corn and potatoes, and such like, it is best to mix the urate in an equal quantity of dry soil, and put in the hill about a gill or handful, sprinkled around the seed corn and potatoes as is usually done with ashes.

For beets, turneps, or other vegetables sowed or planted in drill, the urate is to be prepared in like manner and sowed in the drill.

For grape vines, fruit trees, flowering trees, flowers, also for garden vegetables, such as cauliflower, cabbage, melons, cucumbers and the like, urate may be dissolved

*The company have several thousand bushels for sale at the present time.

in water, in proportion of one pound to a gallon of water, and poured on the subject; one application is sufficient; and for articles not herein enumerated, it may be sowed dry on the surface of the ground.

Where the land retains water during the winter, urate must be used only in the spring, in order that its salts may not be absorbed in too large a quantity of water.

Where the land is dry or does not retain water during the winter, urate may be used in the autumn—if, however, the sowing takes place shortly before the hard frosts, it is better to use urate only in the beginning of spring.

As a general rule, more urate is required upon the same quantity and quality of land in autumn than in the spring; if used in the spring it is better to apply the urate in a damp day, or immediately after a heavy rain, if it cannot be applied shortly before the rain, as it is a light substance, liable to be blown off the land by high winds.

There is a great advantage in soaking corn, oats, and all other grain for twelve hours only, in a solution of urate, prepared as above directed, before planting or sowing it, and then rolled in lime or plaster, the corn or grain will start sooner, be stronger, and less liable to attack by worms or birds, but care should be taken not to suffer it to remain longer than twelve hours in the solution, else you might destroy the germinating quality of the grain. It has also been found beneficial to soak timothy or clover seed in urate or poudrette for about four to six hours, and then rolled in lime or plaster, the seed comes up better and grows stronger than any other seed sown at the same time in the same field.

Poudrette.—Poudrette is not dissolved in water before being used as is urate, but is to be used in a dry state, or by mixing it with dry soil in hills or drills, or sown in broad cast on the land, as you would lime or ashes.—Experiments in this country, thus far, have proved the following methods as the most advisable in its application:—

For Corn.—After the furrows have been struck, sprinkle in the place where the hill is to be, before planting, a handful of poudrette, equal to about a gill, then deposite the corn, (double that quantity of poudrette has destroyed corn and burned it up,) then cover up the corn and press the earth down over it with the foot or hoe.

For Potatoes.—The same quantity, namely a handful or gill, may be used very advantageously; and it has so happened, that when the quantity was increased nearly double, no injury resulted, but rather improved the potatoes: a large handful, however, is sufficient.

Compost.—It is worse than useless to attempt to make compost by mixing urate or poudrette with any thing but dry soil; if mixed with other manures, they operate on the other manures until those manures are consumed, before they are beneficial to plants; and in some instances it may be, that the result of the use of the urate and poudrette in the *first* year of their *first* application, will not be as satisfactory to the farmer as he will think he had a right to expect;—this arises from the fact that the land contains a considerable quantity of some former manure upon which urate and poudrette will first act;—at the very next season, however, the farmer will find a crop far superior to his expectation, provided he will put no new manure of any description to the land lately manured with urate or poudrette.

This, however, must be further explained by saying, that it applies to manure placed or dunged in the hill, or where the land is in a high state of cultivation, from having been highly manured in broad cast, which would give the poudrette an opportunity of feeding upon or consuming it. Experience has proved, this year, that where there was a moderate application of lime, or barnyard manure applied to the land in broad cast, it did not appear to effect the influence of the poudrette on the crop.

On Long Island the following has been adopted by a practical farmer with success. For wheat, he used to apply 20 wagon loads of 30 bushels each, equal to 600 bushels of horse manure, which cost him $20, besides carting 20 loads. He now applies 40 bushels of poudrette which cost him $16, and can carry more than sufficient for one acre in a load.

For rye, 450 bushels of horse manure, and now 25 bushels of poudrette.

For oats, 350 bushels of horse manure, and now 20 bushels of poudrette.

For buckwheat 200 bushels of horse manure, and now 15 of poudrette.

Indian corn, one gill in the hill.

Urate and poudrette are light substances, and liable to be blown off the ground by high winds, if sowed on the surface when the ground is not damp; therefore, it is considered best to sow the grain and harrow the land once, and then sow the manure in broad cast and cross harrow the land the second time.

The difference of the season between spring and autumn, and the state of the atmosphere, are to be considered before using either urate or poudrette: damp weather is always to be preferred. Neither of them contain any seed of weeds of any description. An application of 35 bushels to the acre of urate or poudrette once in every three years is sufficient.

Urate and poudrette may be sent to any part of the country in barrels or bags—barrels are preferable when it is liable to get wet. Orders may be given, post paid, directed to "*The New York Urate and Poudrette Company*," box No. 1211, post office, New York.

The urate and poudrette made by this company, is not confined to distribution among its stockholders only, and therefore farmers and gardeners may expect a supply in the order in which their application is made, without any condition of becoming a stockholder, or advancing any more money than may be sufficient to purchase what they need.

The public should be on their guard in relation to the use of the poudrette, as it is feared it may be brought into disrepute by other manufacturers of the articles, who are ignorant of the true method of preparing it, and where quantity rather than quality is considered most desirable.

It may be that on trials of urate and poudrette, a different application may be found more desirable; in such case it is hoped the experimenter will make known his discovery to the public, either by letter addressed to the company, or through the medium of agricultural newspapers. This company have been erecting a large establishment at Lodi, on the Hackensack river, in the county of Bergen, and State of New Jersey, to manufacture urate and poudrette.

Applicants living in New Jersey may always be supplied by calling at the factory, which is near the bridge over the Hackensack river, belonging to the New Jersey Railroad and Transportation Company. There will also be a depot for the article in New York and at Brooklyn, where applicants can always be supplied.

Testimony of the use and value of urate and poudrette, will be found, now and hereafter, on reference to the Cultivator, New England Farmer, and other agricultural papers, from letters or certificates held by the company; the substance of some of such as have been already received, is comprised in the following statement, and of others, have been sent to the papers for publication:

1. George Walton, of the city of New York, gardener, upwards of 56 years of age, and a gardener from his youth, certifies that in the spring of 1837, he planted four young grape vines in a yard, in the city of New York,—that in the summer of 1838, he applied two quarts of poudrette to such vines;—the earth was removed from round the roots and the poudrette applied to the roots and then covered over again with the earth;—they soon began to grow very rapidly. In the year 1839, there was applied, at three different times, about two quarts each time;—the vines have grown very rapidly, and all, except one, which died down to the root in the winter, have a large quantity of fruit, such as he never witnessed before, and ascribes it to the use of the poudrette.—(See Cultivator.)

2. Benjamin Latin Wood, of the town of Poughkeepsie, certifies that he made a solution of the poudrette, and soaked his oats in it six hours,—sowed his oats three weeks later than the usual time, and reaped them only one week later than his neighbors, and his crop was first rate. He planted two rows of the common bush bean, on the 50th of May, in hills, and put one gill of poudrette to each hill, and before the 26th of August following, he had four crops of beans from his bushes. (See Cultivator.) They continued to blossom and yield, so that before the middle of September, he had two additional crops of beans.

3. William H. Wright, of Poughkeepsie, farmer, certifies that he made several experiments with the urate and poudrette. (See Cultivator.) He soaked corn, part in a solution of urate, and part in a solution of poudrette, about 12 hours, according to printed directions, which was planted, and some corn was planted without being soaked: there was a decided benefit in all that was soaked over the other. On other hills of corn, and on potatoes, about a gill of poudrette was applied to each hill, and the effect was quick and powerful, and he says that he never applied any other manure than can be compared with it in its beneficial results;—the potatoes were superior to any he ever saw, both in quality and quantity, and at least two weeks earlier than common. He soaked also oats about 12 hours, and some not so long—the result was the same as applied to the corn—superior to that not soaked, on land in the same condition. He soaked timothy and clover seed a few hours in poudrette, and rolled it in lime,—same beneficial result; and he recommends the manures as the best he ever tried.

The corn above referred to was planted from the 20th of May to the first week in June, some with poudrette in the hill and some without any, but where lime and barnyard manure had been put in broad cast on the land; in three weeks after planting, the poudrette corn was as large again as that on which no poudrette had been put, ripened from two to three weeks earlier in the field than it did in the garden where there was no poudrette, but where other manure had been applied. On the 18th of August, the corn from the field was too old to eat at the dinner table as green corn, and it is believed that corn manured with about one gill of poudrette in the hill, without any other manure, will ripen in our coldest summers, sufficiently early to make an entire crop.—The Mercer potatoes ripened two weeks earlier, and were finer and larger in the month of August, than any other potatoe.

All persons who have made a fair trial of these manures, unite in making the following summary so far as has come to the knowledge of the manufacturers, that is to say—

That the corn, grain and other vegetables sowed or planted in land manured with urate or poudrette, came up quicker, stronger, and of a dark green color, and grew with great rapidity, and promise an increase in yield over any other, not manured with those manures, and the crops ripen from one to three weeks earlier, and the Long Island farmers say it is the cheapest and best manure they can procure.

Morus Multicaulis.—From information received, one gill of poudrette applied to the roots of a young tree, made bare, and then covered with earth, has produced a most powerful effect in its growth and foliage. It does not answer so well to sow it in broad cast, as some persons have done, over the land. With trees or vines, the manure must come in immediate contact with the roots.

Peach trees fail and die from two causes—

1st, from overbearing—and 2nd, they are killed by the grub worm, which enter the body of the tree just at the surface of the earth. To remedy both these evils, it is believed that if you will bare the roots of the tree for some 12 to 20 inches, and put in immediate contact with the roots about two quarts of poudrette in the month of May, and the like quantity in September, and cover the earth over it again, will replenish the exhaustion created by overbearing. At the same periods of time, put close around the body of the tree, at the surface, two quarts of urate, and cover the same with earth, and give it one watering, the effluvia from the urate being of the nature and strength of the spirits of hartshorn, it is believed no worm can exist near it. Tobacco leaves, wrapped around the body of the tree, have been found to be a complete remedy against the grub.

Further Testimony.—Dr. Granville, in his report to the Thames Improvement Company, in speaking of the immense source of agricultural wealth which the sewers of London afford, but which is now worse than lost, makes the following statement of facts furnished by them.

If a given quantity of land sown, and without manure, yields three times the seed employed, then the same quantity of land will produce 5 times the quantity sown, when manured with old herbage, putrid grass or leaves, garden stuff, &c,; 7 times when manured with cow dung; 9 times with pigeon's dung; 10 times with horse dung; 12 times with urine; 12 times with goat's dung; 12 times with sheep's dung; and 14 times with night soil; (night soil is the same as poudrette, and is sometimes called Flemish manure,) or bullock's blood. Or, in other words, an acre of land sown with two bushels of wheat, without manures, will produce 6 bushels; 10 bushels with vegetable manures; 14 bushels with cow dung; 18 bushels with pigeon's dung; 20 bushels with horse dung; 24 bushels with goat's dung; 24 bushels with urine; 24 bushels with sheep's dung; 28 bushels with night soil, or bullock's blood. But if the land be of such quality as to produce, without manure, 5 times the sown quantity, then the horse dung will yield 14, and the night soil 19 2.3 the sown quantity; or land that will yield, without manure, 10 bushels an acre, manured with horse dung, will produce 28, and with night soil, about 39 bushels of wheat per acre.

These results and multitudes of recorded experiments prove, that they in no case vary far from the facts, show the immense superiority of night soil or Flemish manure, over any hitherto employed. In addition, Dr. Granville found that some crops which yield large profits are so extensively cultivated, in both Flanders, can only be obtained in abundance and of the finest quality, by employing what may emphatically be termed Flemish manure, in the preparation of the soil.

Another important matter in the comparative value of the manures, and of essential practical interest to the farmer, has been established by the same authoritive investigations; and that is, that while night soil has produced fourteen times the quantity sown, where the horse dung has yielded only ten—the proportion of the former or Flemish manure, was to the horse dung employed, only as 1 to 5: so that with one ton of Flemish; a larger produce was obtained than with five tons of the best stable manure.

Trouble not yourself about another's business for you will be apt to neglect your own.

From the New York Sun.

Important Facts.

We observe with astonishment and regret, the conclusive evidence which appears in every direction, that the business of Agriculture does not receive the attention due to it in this country, but it is treated with absolute neglect, compared with other pursuits. This ought not to be, and the inhabitants of this country will yet learn, that they have committed a gross error by abandoning the cultivation of the soil, for less independant and more precarious modes of obtaining a livelihood.

Who has ever heard of such a state of things as now exists here? We have a soil as fertile as any that the sun ever shone upon, a country almost boundless in extent, and so cheap, that any man may purchase a farm with the proceeds of a few months labor, yet we are actually importing for consumption, immense quantities of agricultural products from foreign countries! A people, thinly scattered over a land unequalled in fertility, and exhaustless in its resources, are buying their bread, at enormous prices, from countries so overburthened with inhabitants, that political economists have feared that the earth would fail to produce sufficient to support them. Such an extraordinary and unnatural circumstance should excite attention, and awaken the enquiry as to its cause.

The fault, as we have seen, is not in the soil, nor is the country overrun with inhabitants. It is, therefore, evident that the cultivation of the soil is neglected, otherwise we should be exporting agricultural products, but it is easier to show the fact, that agriculture is neglected, than to find a sufficient reason for this neglect. We apprehend, however, that it will be found to spring in a great measure, from the same causes which have produced much evil in this country, and the bitter fruits of which we are now reaping. The first and chief of these causes, is the inordinate thirst for wealth, which pervades every class of society, and induces men to abandon their legitimate business to engage in some wild, hazardous speculation, in the hope of becoming suddenly rich. It is also too often the case that the farmer becomes tired of the moderate and gradual accumulation of property by the products of his land, and leaves the cultivation of it to engage in the business of commerce or manufactures. He finds out his egregious mistake when it is too late. The property he had accumulated is often squandered and lost in consequence of his ignorance of his new business, and he again sighs for the cheerful and independant mode of life which he has abandoned, when it is out of his power to resume it. We have in our mind numberless instances of this kind, where industrious and prosperous farmers have been lured to their ruin, by being induced to lay aside the implements of husbandry, and engage in the universal scramble after sudden wealth.

There is another great error prevalent upon this subject, and that is, the business of agriculture is generally looked upon as less respectable than that of commerce, manufactures, or the professions; and wealthy farmers, instead of teaching their sons their own business, most usually transform them into merchants, lawyers, doctors, or dominees. This is all wrong. Agriculture is the very back-bone of all business, the main-spring of all wealth, and should be regarded as a profession of the highest respectability. It gives those engaged in it a feeling of independence, genuine nobleness without ostentation, honor, honesty and firmness, well calculated to perpetuate the free institutions of our happy country. The truth of the eloquent panegyrics of the ancients upon this employment may be more easily realized here, than in any other country upon earth. We confidently hope to see public opinion speedily righting itself upon this subject, and to find people seeking their permanent interests, and advancing the prosperity and glory of our wide domain, by engaging more generally in this healthful, honest and independent business.

From the Franklin Farmer.

How to introduce a Seton or Rowel.

To the Editor of the Franklin Farmer:

Dear Sir:—Since I have addressed you a piece on the Poll-evil and Fistula of horses, I thought I might add a few directions for those who had not a farrier at hand, or do not wish to employ one. It may also happen that the disorder is found only when it has made too much progress; for as soon as matter has collected inwardly, a "*seton*," or rowel, must be introduced, which can hardly be done without twisting the horse's nose with a very simple instrument, too well known for me to describe it. As to the seton, it is thus prepared:—Cut as many small thongs of leather as may be needed, about 8 inches long, and rather less than 1 inch broad; one end is to be cut rather sharp, the other must have a slit nearly an inch from the extremity of the broad part and one inch long, then draw the skin with the index finger and thumb lower than the swelling; the skin being thus drawn perfectly clear from the flesh and muscles, then take a sharp and narrow pointed knife and plunge it into the skin below the fingers, and introduce the thong of leather immediately to go through the aperture, and pull it on the other side to about half its length, then let go the skin and rub the leather with *Basiliam ointment* mixed with Spanish flies; turn the string so that the mixture should be well introduced under the skin, then pass the sharp end of the thong into the slit so that it is fastened easily. Leave this dressing untouched for 24 hours, after which rub the thong again with the ointment and turn in the sore. When the mattering becomes abundant, the wound must be washed with milk-warm soap suds, and a poultice may be applied and changed twice a day; that is made of either mullein or flax-seed, or even bran well boiled and pretty thick. When the swelling gives way, and the horse almost cured, then the leather is cut off, and the place washed carefully with soap suds until perfectly closed. It would be better to cover any sore of a horse under treatment, or the flies might make it much worse; and the cold in winter is very injurious.

W. Mentelle.

From the Farmer's Cabinet.

Live Fences or Hedges.

For many years past, great efforts have been made to introduce live hedges or fences, in place of those of timber and stone. Partial success, has in some instances, for a while, flattered the hopes of the persevering experimenter—but in general, the efforts have resulted in failure. The introduction of the English Thorn, has long been a favorite object with many gentlemen,* and we cannot conceive why, with proper management, it would not attain the same degree of perfection and usefulness in the southern states as in England. It is not adapted to our upland regions. In the choice of plants for a hedge, the influence of soil and climate should be particularly considered, as upon these, and right management, more than any thing else, will depend the success or failure. We should therefore rely more upon *native* than *foreign* plants.

That we have a variety of plants, in almost every section of our country, well adapted to all the purposes of hedging, no doubt can be entertained. Years ago,—when a few individuals, bursting the shackles of prejudice,—set themselves earnestly to work, to improve and advance the agriculture of the country generally—this was one of the first subjects that claimed their attention. Numerous experiments were made in Pennsylvania, Delaware, Maryland, and more especially in Virginia. Fences of native, as well as of foreign plants, were set out—and so far as I have been able to gain information, the advantage, as regards durability and use, was in favor of the native plant, portions of which are now standing.

The question which will naturally arise in the mind of the reader, taking the statement to be correct, will be, "why is it that these fences do not abound over the whole country—I never saw one?" The answer is simple—it is to be found in the character and spirit of our countrymen. Almost every thing of importance that has been accomplished in this great country, has been on the "high-pressure principle." The early advocates of agricultural improvement, among whom we find a Washington, a Jefferson, a Peters, a Livingston, a Pickering, a Lincoln, a Taylor, a Garnett, a Cooper, a Bordley, a Lorrain, a Worth, and many other illustrious, men, were not sustained by the great mass of the people—for whose benefit, and not their own—they labored. In this case, those farmers we presume, who were induced, or perhaps, *persuaded* by its friends to turn their attention to this subject, did not expect *too great*, but too immediate results. This is the rock on which thousands fail. Lacking persevering patience, they become lukewarm in an enterprise—lose their interest, after which total neglect, if not absolute disgust, ensues.

Among the variety of *native plants, the Red Cedar* was the most conspicuous, as it was probably the most valuable. The late Col. John Taylor, of Caroline, Virginia, recommended it as answering every desirable purpose. With proper care and attention, a hedge of great beauty, strength and durability, may be formed of the cedar in about seven years from the period of planting,

"For the purpose of raising a *nursery of cedar plants*, let the berries be gathered in November and December, and having detached the resinous substance in which the seeds are enveloped, as far as practicable, which may be done by rubbing—mix them with unslacked ashes, in which let them remain two weeks—then plant them in drills after the manner of planting peas, and if good, they will vegetate and come up the following spring. With good nursing, they will be fit for removal into a hedge in two years. The trenches in which they are to be placed, should be prepared with light rich earth. The first of March is the proper time for planting them. When the plants have attained the height of three feet, the trimming should commence; the best time for which is, the middle of summer. The more thoroughly the seeds are cleansed, and the earlier the plants are set out in the spring the better."—*Farmer's Guide.*

"*Col. Taylor's method of planting the Cedar Hedge.*—From December to the middle of March, the smallest plants are to be taken up in a sod of a square, conformable to the size of the spade used, as deep as possible, which sod is to be deposited unbroken in a hole as deep, made by a similar spade, the earth being used to fill up the crevices between the sod and the hole for its reception. I plant these cedars on the out and inside of a straight fence, on the ridge of a ditch, the plants in each row being two feet apart, both in the direction of and across this ridge, but so that the plants on one side of the fence will be opposite to the centre of the vacancies between those on the other. They should be topped at a foot high, and not suffered to gain more than four inches yearly in height, such boughs or branches excepted, as can be worked into the fence at the ground. Of these great use may be made in thickening the hedge, by bending them to the ground and covering them well with earth in the middle, leaving them growing to the stem and their extremities exposed—thus they invariably take root, and fill up gaps. If properly cultivated, and the land is strong, they will form an elegant live ever-green fence, in a shorter time than is necessary to raise a thorn fence in England by the book.—*Taylor's Orator, third ed. page* 174. Several years after the above was written and published, Mr. Taylor says, in a note on the subject—"My experiments in cedar-hedging have become two or three years older, and have removed every doubt of its cheapness, practicability and importance."

When speaking of *live-hedge, the English thorn, hawthorn*, or as it is sometimes called *quick*, is generally understood. We have already adverted to its introduction in this country, and can only refer in brief terms to its management. A *proper choice of plants* is of vast importance. The hawthorn is readily produced from the seeds of its fruits; is best raised in the nursery, and in two years transplanted from the seed bed, in the line of the fence. *The preparation of the soil* is a point of the first importance; as it will constitute in many cases the difference between success and failure. The ground on the line of the fence should undergo a complete preparation by deep and effectual ploughing, or trenching with the spade, and by a thorough manuring. Where a quantity of vegetable matter is present in the soil, lime may be used—but where the soil is poor, both lime and dung should be applied.

"The line of fence being determined, it is laid off by means of poles, like the ridges of a field, and marked upon the ground. The line of the side of the ditch along which the thorns are to be set being marked out by the rod and line, and notched by the spade, the workman takes off a part of the earth from the surface of the intended ditch and lays it along the future line of thorn, about six inches back of the notched line. This forms what is called a scarcement. He then beats down the earth or rods thus laid with his spade, so that the outer surface shall be in the line of the future mound, sloping a little backward. It is upon the row of earth or rods thus placed, technically called the thorn-bed, that the thorns to be planted are laid. A further portion of the ditch is then stripped off and thrown behind the thorn-bed. The plants, the stems of which are generally eight inches high, exclusive of the root, are to be placed firmly upon the thorn-bed, so that, when the mound is made, they may project a very little beyond the surface, or rather just reach it. The distance at which they may be planted from one another is about eight inches, while one or more persons are engaged in laying the thorns, another is to shovel up from the ditch the loose mould immediately next the surface, and place it upon the stems of the plants. This earth being compressed by the foot, the plants will be firmly fixed in their position. The ditch is cleared out to its full depth, and the earth thrown upon the bank. The mound is then to be rounded at the top, and beat all around by the shovel; and this process completes the formation of the hedge and ditch. The ditch should be narrowed to a spade's breadth at bottom, and so laid as to permit the regular descent of water. The sides may be made to slope at an angle of 45°. The proper time for planting is from October to the beginning of March, or while vegetation is inert."—*Professor Low's Elements.*

In the *after culture of the hedge*, which must be rigidly attended to, for the first four or five years especially, the application of new and rich earth to the roots, thorough weeding and loosing the earth of the mound, which is apt to become baked and hard, must not be overlooked—neglect in this case would prove fatal. Obstructions should also, whenever they present themselves, be immediately removed, so that the passage of

* Mr. Garnett is still opposed, as he ever has been, to the introduction of live hedges. His zeal in the cause of agriculture has increased with years. His efforts indicate all the vigor of youth.

water may not be interrupted. The value and beauty of the hedge, depends in a great degree upon the management of it while in its young and tender state. The greatest possible care and judgment is to be exercised in pruning. Loudon says, that from the first year of planting, till the hedge has risen to five or six feet in height, the main stems ought to be left untouched, and the pruning confined solely to the side branches, leaving those next the root pretty long, and gradually tapering towards the top.

We have now described the elementary species of the live or hedge fence, which is the base or foundation of all the others. There are also *compound fences*, the principal and most efficient of which is the stone wall and live fence combined. But as it is not likely to be of much practical service, the description is omitted, as well as the description of palings and ornamental fences. J. M.

Capons.

One of our subscribers, a few weeks since, wished to be informed respecting the art of making capons. As we were not acquainted ourselves with the process, and having no work at hand treating upon the subject, we have delayed answering until the present time. The following article from "Dickson on Poultry," was furnished by a friend.

We think when our correspondent becomes acquainted with the cruel and barbarous operation, he will be satisfied to let his chickens alone, and suffer them to enjoy their brief existence without interruption, until the day they are doomed to submit to the poulterer's knife. However gratifying it may be to the appetite of the epicure, the thought of the anguish which the fowl had endured in the process, would to us, be a draw back on the gratification. We do not believe the operation can be performed without giving pain, although we are assured to the contrary.—*N. E. Farmer.*

"If cocks, when young, are emasculated, so as to take away their natural reproductive feelings, it has a prodigious effect upon their condition; and a similar effect may be produced upon young hens, by operating upon their egg organs. The art of making capons has been practised from the earliest antiquities of Greece, India and China, for the purpose of improving the flesh of birds for the table, in tenderness, juiciness and flavor.

Chinese Mode of Making Capons.—The Chinese, who are very expert in the art of making capons, use the following method: The wing of the fowl being folded back till they meet, the left foot of the operator is placed on them, the fowl being laid on its left side: the great toe of the right foot is placed on its legs: the feathers are then plucked off by the side—an incision, about an inch in length, commencing about an inch from the back-bone and extending obliquely downwards, is made with a knife, the cutting part of which is bevelled to a point, like a dissecting scalpel. This incision is carefully carried through the skin, muscles and membranes, till the intestines are laid bare, while flat blunt hooks are put into the incision, which is extended and kept open by the elasticity of a bamboo, or whalebone: the intestines are then pushed aside with a pair of forceps, which are used to lay hold of the stone when it is by this means brought into view, while there is passed over it, through a bamboo or elder tube, a horse hair, which is drawn backwards and forwards through the tube till the spermatic chord is cut through; the stone is then scooped out. The other stone is removed in the same manner.—No blood issues from the spermatic chords, nor does the animal seem to feel pain. The hooks are then removed, the wound is closed up, the feathers which have been plucked off are stuck upon the wound with the blood, and the wing being put down on it, the animal walks off as if nothing had happened. Young cocks, three month old, are made choice of for the operation, which must, if possible, be performed before July, as it has been remarked that capons made later than this never prove fine."—*Dickson on Poultry.*

Foot Rot in Sheep.

A subscriber wishes to know how to remedy this disease which has broke out in his flock of sheep.

We had hoped that this disorder would not again be known among the flocks in this State. We saw considerable of it in several flocks about ten years ago, but have not heard of it for several years since, until now. It is a troublesome disease, and requires close and unwearied attention to eradicate it.

It consists in an ulceration of the foot between the claws of the hoof and underneath the hoof—spreading and becoming fetid and gangrenous, until at length, if neglected, the whole foot becomes a mass of disease.

The following method we have seen successfully used. First, cut away, with a sharp knife, the horn of the hoof where the disease is seated—let the part bleed freely.—Then cleanse it well with soap suds. Then take blue vitriol, make a strong decoction of it in water or spirits—but water will do—and plunge the foot in it, or apply it faithfully to every part. This should be done frequently, and the sheep should be kept in a clean place, where dirt cannot get into the diseased parts.

A solution of *Chloride of Lime*, applied to the foot is excellent in destroying the bad smell and bringing on healthy action.

This may be had of the apothecary or of the paper makers for a trifle. Whatever is done should be done thoroughly. It will be of no use to pare away part of the hoof, and leave a little part where it is diseased, untouched; nor will it do to take a part of the flock in hand and leave the rest. Some think that if Sheep run in a pasture where others, affected with the disease have been, they will contract the disease from matter left upon the ground or grass. The truth of this we do not know.—*Maine Farmer.*

From the Zanesville Gazette.

New things—Rohan Potatoes vs. Long Reds.

We have a desire for improvement sufficiently strong to prompt us to make trial of all articles which are supposed to be extraordinary valuable, when we can do so without incurring an unwarrantable expense.

In vegetables, experiments may generally be made on a small scale, which, if properly conducted, would be as fair tests, and lead to as correct conclusions, as though acres of land and hundreds of dollars had been at risk. Some people never experiment at all. They fancy, or "*guess*" that some things are better than others, and thereupon they adopt them, and continue forever to use them, without ever knowing whether the articles are comparatively profitable or not. A man takes it into his head that some substance—lime, ashes, bone dust, plaster paris, or something else, is a valuable manure, and he goes on to use it, but in such a manner that he cannot tell what its effects are. He uses the same substance for the whole field, and he cannot tell how much of the crop is to be credited to the manure; and, of course, he does not know how much the manure is worth. If he had used some other kind of manure on a part of the field, and had left a part without any manure, the soil, being of similar quality, he could have easily told, by calculating the proportional yield of each part, which was the best manure, and what each was really worth. An experiment of this kind would have been attended with but little expense, and the results would have been a good guide for the future. We once knew a man who was in the habit of using considerable lime on his land every year, as he thought, to profit, till, by making an experiment, he ascertained that the increase of his crop had been attributed to a wrong cause. Many people, when they see a large animal or large vegetable, are led at once to consider that the race or variety to which it belongs, is uncommonly valuable; without stopping to inquire how much ground it occupied, or how much labor and expense attended its production. Now, in all these things, PROFIT should be the criterion. The value of animals should be reckoned by the amount of meat, &c. afforded in proportion to the food consumed; and the value of vegetables, by the sustenance they afford in proportion to the ground they occupy and the expense attending their cultivation. To this test we intend to bring all varieties of animals and vegetables, before we can feel fully justified in making up a positive judgment upon them.

By referring to our memorandum book, we find, that on the 26th day of April last, we planted one Rohan potatoe, weighing one pound, cut into thirteen pieces, each piece containing one or more eyes, and making one hill to each piece. We also planted at the same time, the same weight, (one pound) of the kind of potatoes commonly known as *Long Reds*, or *La Plata* Reds, they having been originally brought from the river La Plata, South America. These were cut into precisely the same number of pieces as the Rohan, and made just the same number of hills. As the experiment may, just at this time, be regarded as rather an important one, perhaps the details may not be uninteresting.

The soil is a deep alluvien, with rather too large a proportion of clay, in its composition. It had lain for several years in grass, till last year it was broken up with a view of raising a crop of turneps, but the severity of the drouth destroyed them. The past spring it was well manured with long stable manure, spread evenly over the surface, and ploughed in. It was then furrowed about four feet apart, and the potatoes planted in hills. In one of these furrows we planted the potatoes above mentioned. There was no perceptible variation in the quality of the soil, and we observed the utmost exactness in planting, by taking a stick of a convenient length, and marking off the hills precisely two feet apart. In cultivation, they received the same attention as the rest of the lot. They were worked once with the cultivator—the weeds in the row were cut with the hoe—and the ground, being rather heavy, it was all worked over once with the spade.

On the last day of September the crop was harvested. The vines of all the kinds were dead. The result, so far as the experiment was concerned, is as follows:—one pound of Rohan seed produced 32 1-2 lbs.—one pound seed of Long Reds produced 41 1-2 lbs.—difference in favor of Long Reds, 9 lbs.

We chose the Long Reds to set against the Rohans in this experiment, because we deem them the most productive kind we have ever been acquainted with, and we thought if the Rohans could beat *them*, there could be no doubt that they would beat all.

Now, we do not say that this experiment is wholly conclusive. "One swallow does not make summer," is the old saying. But so far as one experiment can be taken as establishing any thing we think it unobjectionable; and if a few other experiments should show similar results, we should consider the case settled. We should be glad to hear from others on the subject.

From the New England Farmer.

"The surplus crop of wheat in west New York was one and a quarter million bushels less in 1838 than it was in 1835. Whence this great diminution of product? Not from their having been less sown in 1837 than there was in 1834, for it is believed that the quantity sown in 1837 was at least one tenth if not one-fifth greater than in 1834. The deficiency was not owing to bad culture, for the culture, it is believed, has been gradually improving; nor to a bad season, that of 1838 being at least equal to those of ordinary occurrence."—*Albany Cultivator.*

We might add to the above quotation that nearly the whole of New England was once a wheat-growing district, and that now it is rare to find a field of wheat on the Atlantic border. How is this change to be accounted for? In answer, first, in the good old way, *negatively.* It is not because we do not manure our lands. The contents of the dung heap and barn yard are dispensed with a more liberal hand than they were in the days of our ancestors. Second; it is not owing to a change of climate; for on some of our soils in New England, wheat is still raised without difficulty. To what then is this general failure of the wheat crop in New England and its great diminution in New York to be attributed? In my opinion, chiefly to this—the vegetable matter of the soil has been exhausted, or so much reduced as to be unable to bear a good crop of wheat. Let us look at the facts which may be brought forward in confirmation of this opinion.

First—an abundant crop of the finest wheat can still be obtained on new lands. Here are the vegetable deposites of ages—the very food which, according to our supposition, the wheat demands. It is true that interval lands are sometimes found so exceedingly rich in vegetable deposits that they will not bear wheat until after several years cultivation; the reason probably is, there is not enough silex within reach of the wheat roots to form the straw, and although the growth is luxuriant, the straw is unable to sustain its weight, and *lodges*, as the farmers term it.

Second—a liberal supply of ashes sown upon the growing wheat will sometimes bring up a good crop.—The office which the ashes perform in this case, I apprehend to be this: they render what vegetable matter there is in the soil soluble, so that it may all be appropriated by the growing crop.

Third—it has been ascertained by experiments which have been lately instituted in France, that certain saline manures which have a wonderful energy in increasing the foliage of plants, have no tendency whatever to increase or perfect the seed. Now these saline substances are constituent parts of our animal manures. No wonder then, if when our barns are filled with sheaves we find but little grain.

Fourth—on the intervals of Connecticut river the best crops of rye are those which grow on the decomposing sod of turf. We plow grass land in the spring—plant it with corn—in the fall we plow it again and sow rye; a large crop is almost sure to follow such a course.

Fifth—a crop of wheat has been sometimes secured by very deep plowing. Might not this case be explained by supposing that while the vegetable matter in the surface was exhausted, there still remained enough in the subsoil to carry up a crop?

These are some of the reasons which have wrought in my own mind a strong impression that the failure of our wheat-crops in New England, and their alarming deficiency in New York, is to be attributed to a *deficiency of vegetable matter in the soil.* If this impression is well founded, may we not infer also, that for the perfection of other seed-bearing crops, more vegetable matter must be added to the soil. Where shall it be obtained? I answer, from the peat bogs; or if this is impracticable, let resort be had to that exhaustless storehouse from which the vast deposites of peat have themselves been drawn. Any one who knows that peat is formed solely from air and water, and that it has accumulated in some places to the depth of sixty feet, will readily understand why such extraordinary fertility should be imparted to the soil by turning into it succes-

sive crops of clover or other vegetable products of large growth and abundant foliage, formed also mostly from air and water.

Let no hasty reader of the preceding remarks infer that vegetable matter is the *only* requisite for the successful culture of wheat and other grain crops. We must have *sunshine* and *rain*—we must have the *earths*—we must have *alkalies* or alkaline earths to prepare the vegetable food, so far as it may be wanted, to enter itself in the substance of the plant. J. R. K.

Longmeadow, 1st. Sept., 1839.

Management of Sandy Loams.—Mr. Ducket, of Surry, England, a most accomplished and successful farmer, ascribed the luxuriance of his crops to three principles, which he laid down for his guidance, and strictly adhered to. He relied, upon, 1st, deep ploughing, by means of which the roots of his plants were permitted to penetrate the earth to a depth where they found a uniform moisture, by which they were preserved in a healthful and flourishing condition, while those of his neighbors, who were *shallow* ploughers, in seasons of drouth, were measurably destroyed.

In Flanders, in the Pays de Waes, where the soil was originally a barren white sand, by a sure process has been brought to a state of fertility which entitles it to be called a fruitful loam. At first it was barely scratched, being ploughed not more than ten inches deep; it was subsequently gradually deepened as it was enriched,—and it is now stated that this barren sand has been so fertilized that it bears to be entrenched to the depth of fifteen or eighteen inches. This operation is performed every seven years.

Clay soils.—All clay soils intended for spring culture should be turned up in the fall, to receive the benefit of the action of the winter's frost, which mellows and reduces it infinitely better than any treatment which man is susceptible of giving it. If very tenacious, its condition may be greatly improved by simply adding sand to it, after the plowing, and so harrowing it as thoroughly to mix the two together. Instances of the success of this practice are numerous in Europe, and are said to have been so decidedly striking as to excite surprise. In numerous cases the advantages have been equally great as if the clay has been heavily manured.

Milch Cows.—These animals should always, if possible, be kept where they can have free access to good water, whether ranging in the pasture or confined in the barn-yard. From experience, we hesitate not to say that having water always at hand will make a difference of 25 per cent. in favor of their yield. In winter no man should pretend to keep a cow to the pail who does not provide her twice a day with either good rich slops, pumpkins or roots. How in the name of St. George can it be expected that a cow fed upon dry hay, fodder or tops, from November till April, can secrete any considerable quantity of milk; we know that there is a large quantity of nutritive matter in each of these kinds of provender; but to replenish the udder, it is necessary that some such liquids or succulent pabulum named, be daily given. No one should keep a cow to the pail who does not keep her well; humanity as well as true economy are both consulted in so doing.

Marl.—The meliorating effect of marl has been known in Europe for a long time, and clay, stone and shell marl have been severally used with decided advantage, and as our tide water regions are well supplied with each of those varieties of calcareous matter, we trust, as a beginning has been made, that wherever obtainable, our farmers will freely use it. Of this they may be certain, that nothing like permanent improvement can be effected without the use of calcareous manure of some kind. With the aid of lime, or marl in some one of its forms, with the addition of grass leys or green crops of some kind turned in, almost any soil may be pushed beyond even its primitive state of fertility.

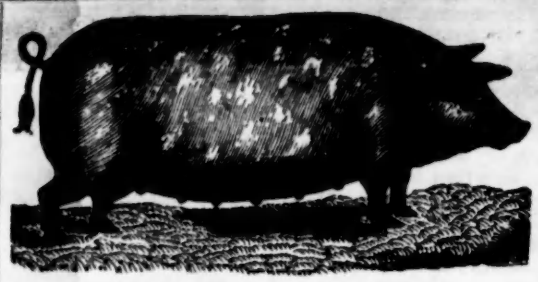
Accumulation of Manure.—The scrapings of the road, the lanes, leaves collected from the woods, weeds from fence corners and any where else, marsh mud, fresh or salt, and indeed all vegetable or animal offal, if spread on the surface of your cow yard, becomes in a few months as good manure as stable or cow dung, for in addition to their own specific virtues, they sponge up and retain great portions of rich liquids which would otherwise be lost. All cow yards should be basin-like in form so as to prevent the escape of such liquids.—*Farmer and Gardener.*

Berkshire Hogs.

THE subscriber has for sale a few full blood, and half blood, Berkshire Pigs. WM. PITKIN.
October 26, 1839.-2tw

For Sale.

6,000 Morus Multicaulis Trees, by the subscriber, at his residence in the town of Gates. They are of the very best quality, and will be sold on liberal terms, by applying by letter, [post paid] or at his residence J C BRAINERD,
Gates, October 2, 1839. w6t*



To the Farmers of Monroe.

The Farmers of Monroe, who wish to improve their breed of Hogs, are respectfully requested to call at the Clinton House Stables, in the city of Rochester, where they will find a *pure blooded Berkshire Boar*, recently obtained from one of the best breeders in Albany.—Such an opportunity, it is believed, has never before been placed within the reach of our farmers, and it is to be hopod that they will appreciate and avail themselves of the privilege thus offered, as they can by this means, at a trifling expense, effect a highly valuable and permanent improvement in their breeds of swine. A view of *Peter Berkshire*, which will cost nothing, will, however, afford the most convincing proof of the benefits to be derived from the proposed cross. He will remain at the above place for some weeks for the benefit of the public, after which he will be removed to the farm of his public spirited owner in Brighton.

Rochester, November 1, 1839.-w5t-m2t

Berkshire Pigs,

DIRECT from the stock of C. N. Bement, Albany, for sale by THOMAS WRIGHT,
October 19, 1839.-w3w Near Macedonville, Wayne Co. N Y.

THOROUGH BRED DURHAM BULL FOR SALE.

MAYDUKE.

COLOR, a fine roan. Beautiful symmetry in all his points. He was calved upon the 13th of February, 1837. Was got by Sir Walter out of Cherry.

Sir Walter was bred by Mr. Chrisp of Doddington, Northumberland, and was imported by Mr. Fergusson into Canada in 1834.—The sire of Sir Walter was Batchelor, Herd Book 1616. Dam, Sprightly by Barmpton, (1677); Grand dam by Waverly, (2819); Great grand dam by a son of Washington, (674.)

Cherry was also bred by Mr. Chrisp and imported by Mr. Fergusson. Her color roan. She was got by Dunstan Castle; grand dam by a son of St. Albans, [2584]; great grand dam by Lawnsleeves, (365.) Cherry was sold into Kentucky, last year, for 300 dollars. For further particulars, apply to the Hon. ADAM FERGUSSON, Nelson Post Office, Upper Canada.

Nelson, October 8, 1839. oct 19-w1m

Farms for Sale.

THE subscriber offers for sale, a Farm containing 480 acres, situated in the town of Collins, Erie County, 2½ miles east of the village of Lodi, and 34 miles south of the city of Buffalo. The surface is undulating; soil principally a deep sandy loam, well adapted to grain or grass, admirably well watered by durable springs of pure water. 170 acres under good improvement, with commodious baild ings. The timber land is covered with a heavy growth of Oak, Chestnut, Hemlock, White Wood, Cucumber, White Ash, Beach, Maple, and a sprinkling of Pine.

Twenty-five per cent of the purchase money will be required down, a liberal credit given for the residue.

Also—a farm containing 450 acres situated in the town of New Albion in the County of Cattaraugus, 2½ miles from the village of Waverly, and 11 miles south of Lodi. About 100 acres under improvement, and well watered. The timber is principally Beach, Maple, Elm, Bass Wood, White Ash and Butternut. This farm is peculiarly adapted to grazing. JOSEPH PLUMB.
Lodi, Erie County, September 20, 1839. oct5w8tm2t

Morus Multicaulis Tree Agency.

THE subscriber now offers for sale some choice lots of the above Trees, warranted of the genuine kind. Also, some Brussa and Canton, now growing in different counties of this state, to be delivered in the fall, or on the ground as they now stand, viz:

In Cuyahoga county,	1 lot of		5,000
Do	do	1	6,000
Do	do	1	4,000
Do	do	1	1,000
Do	do	1	2,500
Do	do	1	800
In Portage county		1	20,000
Do	do	1	8,000
Do	do	1	6,000
In Stark county		1	4,000
Do	do	1	6,000

In Cuyahoga and Portage counties:

1 lot of Brussa	3,000	1 lot of Canton	3,000
1	2,000	1	6,000

Which will be sold in any quantity to suit purchasers, at fair prices, with others, the particulars of which are not yet received, by JAMES HOUGHTON, Agent,
Cleveland City Seed Store.

☞ Persons who are desirous of disposing of their trees through my agency, are requested to forward particulars as early as possible, and the business will be transacted on liberal terms, and agencies are solicited. Cleveland, Ohio, Aug. 17-w3m-m1t

Miner's Patent Pump.

AMOS MINER'S SUPERIOR PATENT PUMPS, for Wells or Cisterns, manufactured by Dagget & Hanson, Jordan, Onondaga County; for sale at Bush & Velie's Store, Exchange street Rochester, N. Y. G. C. MAURER, Agent.
Aug 24 w&mtf

Morus Multicaulis and Morettii.

ELLWANGER & ROGERS are prepared to make contracts to any amount, for genuine Morus Multicaulis and Morus Morettii; the Morrettii are hardy, and will stand the winter in this country.

Any persons living at a distance and wishing to purchase a large quantity to sell again, shall be supplied at the very lowest wholesale prices so as to admit of their selling at the same prices as other persons, and make a very handsome profit. Also Silk Worms Eggs.

E. & R. will supply orders to any extent for every kind of Fruit & Ornamental Trees, Shrubs, Vines, Hardy Plants, Bulbous Roots, Greenhouse or Parlor Plants, &c. &c.

September and October is the time for planting Bulbous Roots in the open ground, such as Tulips, &c. of which they have a very fine collection for sale. Cash paid for Grass Seed, Plum, Peach Stones, and Apple Pips. Greenhouse corner of Buffalo and Sophia-streets Rochester, N. Y. sept14-wtf

For Sale,

A FEW thousand of the Morus Multicaulis trees, by the subscriber, at his farm, near Fairport, in Perinton, will be offered for sale, in lots to suits purchasers, on liberal terms. Persons who can make it convenient to call and examine them on the premises are requested to do so, before purchasing elsewhere. All letters addressed to the subscriber shall receive prompt attention. ZERAH BURR.
Perinton, Sept. 5, 1839. sept14tf

Morus Multicaulis.

S. E. GIBBS & SON, who have been Mulberry and Silk Growers, for several years at Troy, N. Y. wishing to increase their operations, have located themselves on Long Island, 5 miles south of the city of New York, and about 2 miles north of Fort Hamilton, on the west end of the Island, where the Steam Boats Monmouth, Wave, and Osirius, pass and repass daily. They offer to sell a part of their Morus Multicaulis, Alpine and Expansa Mulberry Trees, from 20 to 25,000 deliverable in November next. The trees are all growing in fine order, some of them are over 6 feet high, and very liberally branched. Their genuineness will not be questioned by any one who will call and see them which will be attended with very little trouble or expense being so near the city of New York.

They will be sold in lots to suit purchasers. Likewise a few thousand Silk Worm's Eggs, consisting of Sulphur, Peanut, Long Grays and 2 crop White; and at the same place a number of bushels of the celebrated Rohan Potatoe can be had.

Any communication for us must be addressed to Brooklyn P. O. Long Island.

Reference to Burdick & Wright, 235, Front st. New York.
Brooklyn, Sept. 5, 1839. sept14-w8tm2t

Morus Multicaulis.

THE subscriber is prepared to furnish Morus Multicaulis (Mulberry) Trees, in large or small quantities, delivered any time this fall after the first of October. The trees will be raised from Roots, Layers and Cuttings, of thrifty growth and matured wood, and will be sold at prices in proportion to their size. October and November are the most favorable months to transport them to the Western States, or into Canada, or in any direction where they must be sent a distance by water communication. All orders from a distance, by mail, should be sent early, (post paid,) addressed to E. H. MIX,
July 27, 1839.-w6m Avon, N. Y.

Horse Rakes.

AS some inquiry has been made through this paper relative to Horse Rakes, the subscriber would take this opportunity to say to its patrons, and all others, that he is offering to the public the latest improved Revolving Horse Rake, which can be had at the following places:

Rochester—C. Hendrix. *Auburn*—Hyell, Watrous & Co. *Elmira*—Robert Covell, jr. & Co. *Burdett*—E. Baker & Co. *Ovid*—P. Himrod & Son. *Genoa*—H. G. Bushnell. *Waterloo*—J. L. Lundy & Co. *Seneca Falls*—J. C. Chapman. *Geddes*—S. H. Mann. *Syracuse*—Wright & Wheaton. *Ithaca*—Wm. R. Collins *Lenox*—Horace Hall. *Chittenango*— —— Crouse; and many other places not here mentioned.

Those who wish to purchase, would do well to give us a call.
AMOS HOLBROOK.
Whitesboro', June 12, 1839. jun 24

Agricultural Warehouse and Seed Store.

79 Barclay-street, New-York.

AT this old established stand, the subscribers take pleasure in announcing to the public, that they have made extensive arrangements to accommodate farmers in all articles connected with husbandry, viz:—Agricultural implements, a full and fresh supply of Field and Garden Seeds, Fruit Trees, Durham Cattle, Chinese and Berkshire pigs, 10,000 Morus multicaulis Mulberry trees; Publications on Rural subjects, &c.

Published here the Rural Library, S. Fleet, editor, a few copies of 1st vol. for sale. The object of this work is to constitute a Library at the least possible expense. 2d vol., commencing with Professor Low's Elements of Practical Agriculture, with nearly 250 fine engravigns; subscription $3. Subscriptions received for the Genesee Farmer, Cultivator, &c. &c. J. W. WEAVER & CO.
April 20-wm1y 76 Barclay st, New-York

Election Notice.

SHERIFF'S Office, Monroe County, Rochester, 22d August, 1839. A general Election is to be held in the county of Monroe, on the 4th, 5th, and 6th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed. DARIUS PERRIN.

STATE OF NEW YORK, }
Secretary's Office. } ALBANY, Aug. 15, 1839.

To the Sheriff of the county of Monroe.

Sir—Notice is hereby given you, that the term of service of Chancey J. Fox, a Senator for the eighth Senate District of this State, will expire on the last day of December next, and that a Senator is to be chosen in that District, to which the county of which you are Sheriff belongs, at the General Election to be held on the fourth, fifth and sixth days of November next.

You will also take notice that a proposed amendment to the Constitution is to be submitted to the people at the said Election, at which the Electors are to vote, for the election of Mayors by the People—or against the Election of Mayors by the People.

At the same election, the following officers are also to be chosen, viz: Three Members of Assembly, for said County.
JOHN C. SPENCER.
Secretary of State.

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.
April 15, 1838. SAMUEL MOULSON.
N. B. Cash will be paid for a few thousand two years old APPLE TREES.